COMPLEX TRANSVERSE AC MAGNETO-OPTIC SUSCEPTOMETER FOR DETERMINATION OF VOLUME AND ANISOTROPY FIELD DISTRIBUTION IN RECORDING MEDIA

ABSTRACT OF THE DISCLOSURE

A method and apparatus for determining volume and anisotropy field distribution of thin film granular material includes the use of a magneto-optic probe, a lock-in amplifier, and a computer. The magneto-optic probe utilizes the Kerr effect in order to determine the transverse AC susceptibility of the sample. The Lock-in amplifier determines the complex parameters of the susceptibility as a function of the DC field and AC frequency. Separate distribution values of anisotropy field and grain volume can then be determined mathematically from the relationship of complex susceptibility parameters to the DC field strength.